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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,814	10/17/2000	Yoshinori Uchida	1137-817A	2039

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EXAMINER	
YAO, KWANG BIN	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/688,814	UCHIDA ET AL.	
	Examiner	Art Unit	
	Kwang B. Yao	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it should be in narrative form and generally limited to a **single paragraph** on a separate sheet within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US 5,719,859).

Kobayashi et al. discloses a communication system comprising the following features: as depicted in Figs. 3, 4, 5, 13, regarding claim 1, at least one base station (301), including time slot change request means which sends time slot change information (Fig. 13, 1302) to a subscriber station (302) connected thereto by radio when it becomes necessary to change the transmission rate (column 7, lines 24-55) for data to be sent to the subscriber station (302); and at least one subscriber station (302), including time slot changing means which, upon receiving the time slot change information (Fig. 13, 1302) from the change request means of the base station (301), changes the time slot (Fig. 13, communication using channels 1 and 2) in which to receive data

from the base station (301) in accordance with the time slot change information (Fig. 13, 1302); regarding claim 2, wherein when having sent the time slot change information (Fig. 13, 1302) to the subscriber station (302), the change request means of the base station (301) begins to use the new time slot (Fig. 13, communication using channels 1 and 2) to send data contained in the next frame; regarding claim 3, wherein the change request means of the base station (301) determines the transmission rate in accordance with an instantaneous amount of data (column 7, lines 24-55) sent to the subscriber station (302); regarding claim 4, wherein the change request means of the base station (301) detects the instantaneous amount of data from that amount of data received from a switching center (column 7, lines 24-55) which has yet to be sent to the subscriber station (302); regarding claim 5, wherein at the time of sending the time slot change information (Fig. 13, 1302) to the subscriber station (302), the change request means of the base station (301) obtains the time slot change information (Fig. 13, 1302) from a provisional channel memory (Fig. 12) provisionally pre-assigned the time slot to be used for the transmission of the next frame; regarding claim 6, wherein at the time of sending the time slot change information (Fig. 13, 1302) to the subscriber station (302), the change request means of the base station (301) also sends reservation information (Fig. 13, 1302) indicating the time slot change timing to the subscriber station (302); regarding claim 7, wherein the time slot changing means of the subscriber station (302) determines (column 7, line 62 to column 10, line 20) the time slot change timing in accordance with the reservation information sent from the base station (301); regarding claim 8, wherein when a desired time slot becomes unusable (Fig. 15, 1502) before the time slot changing means of the subscriber station (302) performs time slot switching after sending the time slot change information (Fig. 13, 1302) and the reservation information to the

subscriber station (302), the change request means of the base station (301) sends time slot change information (Fig. 13, 1302) indicating another time slot (Fig. 15, 1503) to the subscriber station (302). Column 5-10.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 5,719,859) in view of Schrader et al. (US 5,896,561).

Kobayashi et al. discloses the claimed limitations above. Kobayashi et al. does not disclose the following features: regarding claim 9, wherein in the case of increasing the data transmission rate, the change request means of the base station determines whether to change the transmission rate by referring to the sendable power of a transmitter in the base station; regarding claim 10, wherein in the case of decreasing the data transmission rate, the change request means of the base station determines whether to change the transmission rate by referring to the sensitivity of a receiver in the subscriber station and the sendable transmission power of a transmitter in the base station. Schrader et al. discloses a communication system comprising the following features: regarding claim 9, wherein in the case of increasing the data transmission rate, the change request means of the base station determines whether to change the transmission rate by referring to the sendable power of a transmitter in the base station (column 33, lines 4-18;

column 34, lines 1-31); regarding claim 10, wherein in the case of decreasing the data transmission rate, the change request means of the base station determines whether to change the transmission rate by referring to the sensitivity of a receiver in the subscriber station and the sendable transmission power of a transmitter in the base station (column 33, lines 4-18; column 34, lines 1-31). It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Kobayashi et al., by using the features, as taught by Schrader et al., in order to provide optimizing communication exchanges in radio frequency data communication network. See Schrader et al., column 2, lines 6-8.

6. Claims 11-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 5,719,859) in view of Akerberg (US 5,150,362).

Kobayashi et al. discloses a communication system comprising the following features: as depicted in Figs. 3, 4, 5, 13, regarding claim 11, at least one base station (301), including time slot change request means which sends time slot change information (Fig. 13, 1302) to a subscriber station (302) connected thereto by radio when it becomes necessary to change the transmission rate (column 7, lines 24-55) for data to be sent to the subscriber station (302); and at least one subscriber station (302), including time slot changing means which, upon receiving the time slot change information (Fig. 13, 1302) from the change request means of the base station (301), changes the time slot (Fig. 13, communication using channels 1 and 2) in which to receive data from the base station (301) in accordance with the time slot change information (Fig. 13, 1302); regarding claim 12, wherein when having sent the time slot change information (Fig. 13, 1302) to the subscriber station (302), the change request means of the base station (301) begins to use the new time slot (Fig. 13, communication using channels 1 and 2) to send data

contained in the next frame; regarding claim 13, wherein the change request means of the base station (301) determines the transmission rate in accordance with an instantaneous amount of data (column 7, lines 24-55) sent to the subscriber station (302); regarding claim 14, wherein the change request means of the base station (301) detects the instantaneous amount of data from that amount of data received from a switching center (column 7, lines 24-55) which has yet to be sent to the subscriber station (302); regarding claim 15, wherein at the time of sending the time slot change information (Fig. 13, 1302) to the subscriber station (302), the change request means of the base station (301) obtains the time slot change information (Fig. 13, 1302) from a provisional channel memory (Fig. 12) provisionally pre-assigned the time slot to be used for the transmission of the next frame; regarding claim 16, wherein at the time of sending the time slot change information (Fig. 13, 1302) to the subscriber station (302), the change request means of the base station (301) also sends reservation information (Fig. 13, 1302) indicating the time slot change timing to the subscriber station (302); regarding claim 17, wherein the time slot changing means of the subscriber station (302) determines (column 7, line 62 to column 10, line 20) the time slot change timing in accordance with the reservation information sent from the base station (301); regarding claim 18, wherein when a desired time slot becomes unusable (Fig. 15, 1502) before the time slot changing means of the subscriber station (302) performs time slot switching after sending the time slot change information (Fig. 13, 1302) and the reservation information to the subscriber station (302), the change request means of the base station (301) sends time slot change information (Fig. 13, 1302) indicating another time slot (Fig. 15, 1503) to the subscriber station (302); regarding claim 21, at least one base station (301), including time slot change request means for sending time slot change information to a subscriber station (302)connected to

the base station (301) by a radio communication channel, when it becomes necessary to change a transmission rate for data to be sent from said base station to said subscriber station (302), and time slot changing means for receiving time slot change information from a subscriber station (302) and changing a time slot in which to receive data from said subscriber station (302). Column 5-10. It is clearly seen that the above features in the base station of Kobayashi et al. are being implemented in the subscriber station recited in claims 11-18 and 21; while the features in the mobile station of Kobayashi et al. are being implemented in the base station recited in claims 11-18 and 21. In other words, the claimed subscriber station has the functionalities of the base station of Kobayashi et al., which can initiate time slots change and select time slots. Akerberg discloses a communication system comprising the following features: a mobile station can independently choose time slot for a call other than the base station. See Abstract, and column 7, lines 24-65. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Kobayashi et al., by using the features, as taught by Akerberg, in order to provide an convenient procedure in the communication system. See Akerberg, column 1, lines 54-69.

7. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 5,719,859) in view of Akerberg (US 5,150,362) as applied to claim 11 above, and further in view of Schrader et al. (US 5,896,561).

Kobayashi et al. and Akerberg disclose the claimed limitations above. Kobayashi et al. and Akerberg do not disclose the following features: regarding claim 19, wherein in the case of increasing the data transmission rate, the change request means of the subscriber station determines whether to change the transmission rate by referring to the sendable power of a

transmitter in the subscriber station (column 33, lines 4-18; column 34, lines 1-31); regarding claim 20, wherein in the case of decreasing the data transmission rate, the change request means of the subscriber station determines whether to change the transmission rate by referring to the sensitivity of a receiver in the base station and the sendable transmission power of a transmitter in the subscriber station (column 33, lines 4-18; column 34, lines 1-31). It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Kobayashi et al. and Akerberg, by using the features, as taught by Schrader et al., in order to provide optimizing communication exchanges in radio frequency data communication network. See Schrader et al., column 2, lines 6-8.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Asai (US 6,603,747) discloses a communication control method.

Padovani et al. (US 6,574,211) discloses a method for high rate packet data transmission.

Cho (US 6,377,800) discloses a resource assignment method.

Wiedeman et al. (US 6,272,325) discloses a method for considering user terminal.

Suzuki (US 6,044,067) discloses a transmission rate control method.

Ward et al. (US 5,701,294) discloses a system for flexible coding.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 571-272-3182. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER

Kwang B. Yao
August 31, 2004